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FRACTURES OF THE HUMERUS.

BY FRANK HASTINGS HAMILTON, M.D., BUFFALO.

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Results.—In twenty-three examples, the average shortening is about one quarter of an inch; but of these, thirteen are not shortened at all, so that the average of shortening in the remaining ten is three quarters of an inch: the amount of overlapping varying from one quarter of an inch to one inch and a quarter.

In twenty-eight examples, I have twice seen the humerus refuse to unite; once when the fracture was in the lower third of the shaft. This was an oblique, compound fracture, and no union had taken place at the end of five months. The man was intemperate, but in pretty good health.* In the second case, the fracture had occurred a little below the middle of the bone, and it was simple. Five months after the accident he consulted me, when I found the elbow anchylosed, the forearm being fixed at right angles with the arm.† Neither of these patients had been under my care previously, but I learned that an intelligent Canadian surgeon had treated one of them, and the other had been seen and treated by several surgeons.

In two other cases, the elbow has remained somewhat stiff a long time after the splints were removed; in one case, complete freedom of motion was not restored at the end of fifteen years.

Generally, however, the motions of the elbow-joint have been very soon restored after the removal of the splints and sling.

I ought to mention that, not infrequently, fractures of the shaft of the humerus, and especially where they are occasioned by direct blows, are followed by great swelling, and sometimes by abscesses. In one instance, the fracture having taken place within the insertion of the deltoid muscle, the sharp extremity of the lower fragment was made to penetrate the flesh, causing an abscess, and finally tetanus, of which my patient soon died. A medical

* Report on Deformities, &c., Case XXXIII.
† Ibid., Case XXI.

gentleman, and a friend of the family, suggested that the bone had not been properly "set," for which omission I ought to be held responsible. But, fortunately for my reputation, the friends had more intelligence than the doctor, and were able to appreciate the difficulty of "setting" a very oblique fracture.

The following remarks of Malgaigne are too pertinent to be omitted in this connection. "When there is great obliquity, with overlapping, or a fracture with splintering, or a multiple fracture, a certain amount of deformity is inevitable, and the formation of callus demands one or two weeks more. With the inflammation comes also the danger of suppuration, and later, a rigidity of the articulations difficult to dissipate. In short, we must not forget that of all fractures, those of the humerus are most liable to fail of consolidation."

On the other hand, we shall find, in the case of this bone, as in all others, some remarkable exceptions, where, although the fracture may be compound, and badly comminuted, yet the limb has been saved and made useful. Ayres, of New York, reports a case of this kind, in which he removed a portion of the shaft, and although the brachial artery was probably obliterated, a good union took place;* and Walker, of Boston, has noticed two or three similar examples.†

For an account of two remarkable cases of compound fracture of the shaft of the humerus, illustrating the powers of Nature in childhood, in the restoration of broken and comminuted bones, the reader may consult, in the *New York Journal of Medicine* for November, 1849, a paper entitled "Amputations and Compound Fractures," by John O. Stone, Surgeon to Bellevue Hospital. The accidents occurred in children, one of whom was four, and the other six years of age, both of whom recovered useful arms.

Treatment.—In the treatment of fractures of that portion of the shaft of the humerus now under consideration, I have preferred generally a broad and thick splint of gutta percha, felt may answer nearly as well, sufficiently long to extend from the neck to the wrist, moulded accurately, and applied to the outside of the shoulder and arm, while the limb is flexed to a right angle, and while extension is being made upon the humerus. This being properly padded, and secured in place by rollers, I place the arm in a sling beside the body. The sling must, however, be so arranged, by being looped under the wrist, and not under the elbow, as that the weight of the elbow and lower part of the arm may aid in making extension. Welch's splint will answer the same purpose; or three narrow splints of different lengths may be used, but I do not find them so convenient as Welch's, or gutta percha applied as I have directed above.

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* Ayers. New York Journal of Medicine, January, 1857, p. 24, Third Series, Vol. XI.

† Walker. Essay on Compound Fractures &c. by Wm. J. Walker, of Boston, published in London in 1845.

Other surgeons have sought to make permanent extension in these and certain other fractures of the humerus, by various contrivances. Mr. Lonsdale constructed an instrument which might be lengthened or shortened to suit the case; it was made of steel, and was worked with a screw operating upon cogs in a sliding bar; resembling, in some respects, the arm portion of Jarvis's adjuster. In the second London edition of a series of plates illustrating the action of the muscles in producing displacement in fractures, by S. W. Hind, is a drawing of an apparatus invented by the author for the same purpose, which is very simple, and in some respects more complete than Lonsdale's, and which may be easily adapted to almost any form of arm-splint. Indeed, nothing more is necessary than to attach to the ordinary long splint a movable crutch.

I believe that all these contrivances may prove occasionally useful, but the common experience of surgeons has shown how difficult it is to accomplish much extension by means of pressure in the axilla; a mode, too, which I think must be wholly inadmissible when the fracture approaches the upper end, since the pressure by the crutch-head upon the pectoralis major and latissimus dorsi, which constitute the margins of the axilla, must tend to displace the fragments upon which they act, inwardly, and which seldom can be applied with much force to fractures near the condyles, on account of the probable existence of inflammation and swelling about the joint.

Malgaigne, when speaking of the apparatus of Lonsdale, remarks: "But the surgeon should never lose sight of the fact that permanent extension is a resource always dangerous, often useless, and which demands in its application much caution and watchfulness."

The following example will illustrate the practical difficulty of employing permanent extension in fractures of the humerus.

A laborer, aged 30, was admitted into the Buffalo Hospital of the Sisters of Charity, on the second day of October, 1853, with a simple, oblique fracture of the humerus, which had occurred three days before. The fracture was situated within the insertion of the deltoid, and having been produced by the rolling of a log upon the arm, the whole limb was much swollen. The night following his admission, in a fit of delirium tremens, he removed all of the dressings. When I visited the wards in the morning, I found the fragments displaced and the muscles contracting violently. The ordinary dressings were applied, and continued until the fifth day, when, as the delirium had not ceased, and the muscles continued to contract with great violence, it was determined to attempt permanent extension. For this purpose we lifted the elbow upward and outward to relax the deltoid, and then having made extension with the forearm placed at a right angle with the arm, we fitted carefully a large gutta percha splint to the forearm, arm, axilla and side, in such a manner that when the splint was secured to these several

parts, the arm could not fall to the side of the body completely, and in proportion as it did fall downward, it would make extension upon the arm. This splint was well padded, and secured in place with rollers.

On the sixth day the delirium had ceased, and never returned. The dressings were well in place, and seemed to accomplish the indication we had in view; but, on the seventh day, although he had kept very quiet, everything was disarranged, and the whole had to be re-adjusted. On the eighth and ninth, the same thing occurred. During this time we had varied the dressings, position, &c., each day, to meet, if possible, the difficulties, but it was at length deemed unwise to pursue the attempt any farther, and we returned to the use of the ordinary splints, laying the arm against the side of the body. The union was finally completed without either overlapping or angular displacement.

Something may always be accomplished when the patient is walking about, by allowing the elbow to escape from the sling, so that its weight shall make constant traction upon the lower fragment; and the plan which I suggested some years since, of treating certain cases of delayed union of the humerus, namely: extending the arm at full length by the side of the body, so that the lower fragment shall receive the whole weight of the forearm and hand, might occasionally prove valuable in recent fractures where the tendency to override was very great. In two instances, I have already put this plan sufficiently to the test to determine its safety and utility.

The precise plan, and my reasons for its adoption in cases of delayed union, were set forth in the following paper, read before our city Association, and published in the *Buffalo Medical Journal* for August, 1854.

"It has been observed by surgeons, that non-union results more frequently after fractures of the shaft of the humerus, than after fractures of the shaft of any other bone. This observation is confirmed by my own researches.

"Comparing the humerus with the femur, between which, above all others, the circumstances of form, situation, &c., are most nearly parallel, and in both of which non-union is said to be relatively frequent, I find that of forty-nine fractures of the humerus, four occurred through the surgical neck, twelve through the condyles, and twenty-nine through the shaft. In one of the twenty-nine, the patient survived the accident only a few days. In four of the remaining twenty-eight, union had not occurred after the lapse of six months, and in many more it was delayed beyond the usual time. Two of the four were simple fractures, and occurred near the middle of the humerus; the third was compound, and occurred near the middle also; the fourth was compound, and occurred near the condyles.

"This analysis supplies me, therefore, with four cases of non-

union, from a table of twenty-eight cases of fractures through the shaft.

"Of eighty-seven fractures of the femur, twenty occurred through the neck, one through the trochanter major, and one through the condyles. The remaining sixty-five occurred through the shaft, and generally near the middle, and not in one case was the union delayed beyond six months.

"To make the comparison more complete, I must add that of the twenty-eight fractures of the shaft of the humerus, six were compound; and of the sixty-five fractures of the shaft of the femur, six were either compound, comminuted, or both compound and comminuted. The six compound fractures of the shaft of the humerus furnished two cases of non-union. The six cases of either compound or comminuted, or compound and comminuted fractures of the femur, furnished no case of non-union.

"I beg to suggest to the Society what seems to me to be the true explanation of these facts.

"It is the universal practice, so far as I know, in dressing fractures of the humerus, to place the forearm at a right angle with the arm. Within a few days, and, generally, I think, within a few hours, after the arm and forearm are placed in this position, a rigidity of the muscles and other structures has ensued, and to such a degree that if the splints and sling are completely removed, the elbow will remain flexed and firm; nor will it be easy to straighten it. A temporary false anchylosis has occurred, and instead of motion at the elbow-joint, when the forearm is attempted to be straightened upon the arm, there is only motion at the seat of fracture. It will thus happen that every upward and downward movement of the forearm will inflict motion upon the fracture, and inasmuch as the elbow has become the pivot, the motion at the upper end of the lower fragment will be the greater in proportion to the distance of the fracture from the elbow-joint.

"No doubt it is intended that the dressings shall prevent all motion of the forearm upon the arm; but I fear that they cannot always be made to do this. I believe it is never done when the dressing is made without angular splints, nor is it by any means certain that it will be accomplished when such splints are used. The weight of the forearm is such, when placed at a right angle with the arm, and encumbered with splints and bandages, that even when supported by a sling, it settles heavily forward, and compels the arm-dressings to loosen themselves from the arm in front of the point of fracture, and to indent themselves in the skin and flesh behind. By these means the upper end of the lower fragment is tilted forward. If the forearm should continue to drag upon the sling, nothing but a permanent forward displacement would probably result. The bones might unite, yet with a deformity.

"But the weight of the forearm under these circumstances is

not uniform, nor do I see how it can be made so. It is to the sling that we must trust mainly to accomplish this important indication. But you have all noticed that the tension or relaxation of the sling depends upon the attitude of the body, whether standing or sitting—upon the erection or inclination of the head—upon the motions of the shoulders, and in no inconsiderable degree upon the actions of respiration. Nor does the patient himself cease to add to these conditions by lifting the forearm with his opposite hand whenever provoked to it by a sense of fatigue.

"This difficulty of maintaining quiet apposition of the fragments while the arm is in this position, at whatever point it may be broken, becomes more and more serious as we depart from the elbow-joint, and would be at its maximum at the upper end of the humerus, were it not that here a mass of muscles, investing and adhering to the bone, in some measure obviates the difficulty. Its true maximum is therefore near the middle, where there is less muscular investment, and where, on the one hand, the fracture is sufficiently remote from the pivot or fulcrum to have the motion of the upper end of the lower fragment multipled through a long arm; while, on the other hand, it is sufficiently near the arm-pit and shoulder to prevent the upper portion of the splint and arm-dressings from obtaining a secure grasp upon the lower end of the upper fragment.

"It must not be overlooked that the motion of which we speak belongs exclusively to the lower fragment, and that it is always in the same plane forward and backward; but especially that it is not a motion upon the fracture as upon a pivot, but a motion of one fragment to and from its fellow. This circumstance I regard as important to a right appreciation of the difficulty. Motion, alone, I am fully convinced, does not so often prevent union as surgeons have generally believed. It is exceedingly rare to see a case of non-union of the clavicle. Of forty-seven cases of fracture of the clavicle which have come under my observation, and in by far the greater majority of which considerable overlapping and consequent deformity resulted—of this number only one has resulted in non-union, and in this instance no treatment whatever was practised, but from the time of the accident the patient continued to labor in the fields and hold the plough as if nothing had occurred. I have, therefore, seen no case of non-union of the clavicle where a surgeon has treated the accident. Indeed, what is most remarkable, its union is more speedy, usually, than that of any other bone in the body, of the same size. Yet to prevent motion of the fragments in a case of fractured clavicle with complete separation and displacement, except where the fracture is near one of the extremities of the bone, I have always found wholly impracticable. Whatever bandages or apparatus I have applied, I have still seen always that the fragments would move freely upon each other at each act of inspiration and expiration, and at almost every motion of the head,

body or upper extremities. It is probable, gentlemen, that you have made the same observation.

"From this and many similar facts, I have been led to suspect, for a long time, that motion has had less to do with non-union than was generally believed.

"I find, however, no difficulty in reconciling this suspicion with my doctrine in reference to the case in question; and it is precisely because, as I have already explained, the motion, in case of a fractured humerus, dressed in the usual manner, is peculiar.

"In a fracture of the clavicle through its middle third (its usual situation), the motion is upon the point of the fracture as upon a pivot; although, therefore, the motion is almost incessant, it does not essentially, if at all, disturb the adhesive process. The same is true in nearly all other fractures. The fragments move only upon themselves, and not to and from each other. I know of no complete exception but in the case now under consideration.

"Aside from any speculation, the facts are easily verified by a personal examination of the patients during the first or second week of treatment, or at any time before union has occurred, both in fractures of the humerus and clavicle. The latter is always sufficiently exposed to permit you to see what occurs, and as soon as the swelling has a little subsided in the former case, you will have no difficulty in feeling the motion outside of the dressings, or, perhaps, in introducing the finger under the dressings sufficiently far to reach the point of fracture. I believe you will not fail to recognize the difference in the motion between the two cases. Such, gentlemen, is the explanation which I wish to offer for the relative frequency of this very serious accident—non-union of the humerus.

"I know of no other circumstance or condition in which this bone is peculiar, and which, therefore, might be invoked as an explanation. Overlapping of the bones, the reason assigned by some writers, is not sufficient, since it is not peculiar.

"The same occurs much oftener, and to a much greater extent, in fractures of the femur, and equally as often in fractures of the clavicle, yet in neither case are these results so frequent. Nor can it be due to the action of the deltoid, or of any other particular muscles about the arm, whether the fracture be below or above their insertions, since similar muscles, with similar attachments, on the femur and on the clavicle, tending always powerfully to the separation of the fragments, occasion only deformity, but not non-union.

"If I am correct in my views, we shall be able sometimes to consummate union of a fractured humerus where it is delayed, by straightening the forearm upon the arm, and confining them to this position. A straight splint, extending from the top of the shoulder to the hand, made of some firm but moulding material, and made fast with rollers, will secure the requisite immobility to the frac-

ture. The weight of the forearm and hand will only tend to keep the fragments in place, and if the splint and bandages are sufficiently tight, the motion occasioned by swinging the hand and forearm will be conveyed almost entirely to the shoulder-joint. Very little motion, indeed, can in this posture be communicated to the fragments, and what little is thus communicated, is a motion which experience has elsewhere shown not disturbing or pernicious, but a motion only upon the ends of the fragments, as upon a pivot.

VERATRUM VIRIDE.

BY JAMES B. COLEGROVE, M.D., SARDINIA, N. Y.

[Communicated for the Boston Medical and Surgical Journal.]

THIS article, which has been so recently, and yet quite extensively introduced amongst the profession, and which, as an arterial sedative, seems likely to become a desideratum, judging from the high encomiums bestowed upon it, is nevertheless a *poison*, and whatever virtues it may possess when administered to children, it should, I think, be given with the greatest caution. It is in inflammatory affections of the respiratory organs that it exhibits its qualities in so effectual and happy a manner; and it is equally injurious and danous in all diseases where there is much tendency to emesis. I have never succeeded with this remedy in any degree in enteritis or peritonitis, nor would I attempt its employment in gastritis, or inflammation of the brain, or any of its appendages. Its indiscriminate use in all inflammations would be likely to lead to the most disastrous results. Again, I conceive that there are certain nervous idiosyncrasies which forbid its use, requiring the nicest discrimination on the part of the physician.

CASE.—A. B., a girl, 9 years old, on February 18th, 1858, was seized, at 9, P.M., with severe rigors, followed by fever, thirst, headache and pain in the left lung. I was summoned on the morning of the 20th, and found the condition of the little patient as follows: Pulse 140; tongue covered with a white coat; respiration painful; intense fever, which appeared in occasional flushes, followed by "sinking spells"; a racking cough, and bloody expectoration. The above symptoms of pneumonia were confirmed by auscultation.

Treatment.—Veratrum viride (Norwood's tincture) in doses of two drops, in a teaspoonful of water, once in three hours, with directions to increase the quantity *one drop* at every subsequent dose, unless vomiting occurred, in which event, the quantity to be given should be lessened one half. I also directed the application of tepid water, containing a solution of supercarbonate of soda, to the surface of the body every third hour, and fifteen drops of sweet spirits of nitre every third hour.

Evening.—Patient exceedingly restless. Pulse 144. Three

doses of veratrum viride have been given (nine drops). Expectoration unchanged. Other symptoms are the same as in the morning. Treatment to be continued, and three grains of Dover's powder to be given at 10 o'clock.

Feb. 21st, 9 o'clock, A.M.—The mother of the child has been considerably alarmed by the appearance of the patient. At intervals of two hours, she said, the child would become frantic and wholly unmanageable; her language was incoherent, and she finally became nearly or quite insensible. Thrice this has occurred during the night. The symptoms this morning are unchanged, except that the face is pallid, the lips compressed, and the eyes wide open and glaring. Four doses of veratrum viride have been given (sixteen drops). I directed the nurse not to increase the dose above this quantity. Now, the patient has taken seven doses of the veratrum viride, in all twenty-five drops, in twenty-four hours, with no amelioration of her condition. The haggard expression of her countenance, and the unusual symptoms which have sufficed to create alarm in the mind of the mother, are undoubtedly due to the medicine. No vomiting has yet taken place. Shall I continue the veratrum? or shall I discontinue its use and resort to the lancet? After considerable consultation, I concluded to increase the dose one drop, and try it twelve hours longer. Treatment otherwise unchanged.

12 o'clock, noon.—The unusual interest which I have felt in this case induced me to make another visit after the expiration of three hours. Two doses, of five drops each, of veratrum viride have been given. I should have mentioned that I noticed a slight dilatation of the pupils this morning. Now, this dilatation is increased. The whole expression of the eyes and countenance is wild and unnatural; breathing hurried and difficult; lips white; mouth firmly closed; subsultus tendinum; patient starts up wildly, and screams as if deranged; pulse 160; skin dry, but without much heat; she refuses the caresses of her mother, whom she does not recognize. I resolved to continue the veratrum viride six hours longer, and, in case there should be no improvement, to discontinue it altogether. I have frequently given the medicine, but have never witnessed like results before. Dose, five drops once in two hours. A Dover's powder of three grains to be given during the first interim.

9 o'clock, P.M.—Immediately after the Dover's powder had been swallowed, copious vomiting ensued, since when the patient has slept. I found her now sleeping quietly; pulse 96; skin moist and cool; breathing natural and easy. From this period the patient was convalescent.

Had I not commenced the use of this powerful drug, I think after witnessing the effect produced upon the child, I should have withheld it and employed the lancet, which, with calomel and antimony, is generally sufficient to restore the worst cases of pneumo-

nia. As it was, the result was favorable, yet the ordeal was truly fearful. I will not detain the reader with further remarks upon this case.

I have used the veratrum since the first of January last, in thirty cases of inflammation, and, with some exceptions, I regard it as a safe remedy in the hands of a careful physician. But I do not think it safe at all when given *ad libitum*, or in the hands of nurses. On the contrary, its effects should be constantly and carefully watched, and by the physician himself. Its powers as an arterial sedative have not been over-rated. It possesses alterative qualities, also, which are by no means inconsiderable.

SUTURE OF THE EXTENSOR TENDONS OF THE FINGERS, WITH A CASE OF CURE BY THIS TREATMENT.

BY M. MOURGUE.

[Translated from the *Gazette Médicale*, May 15th, 1858, for the Boston Med. and Surg. Journal.]

SUTURE of the small tendons, like the extensors and flexors of the fingers, is a triumph of modern surgery; and the happy results which have followed its use have given it a place among legitimate operations. The case of M. Mourgue adds another instance of success to those already recorded.

CASE.—A maker of wooden shoes received on the back of his left hand, on the 10th of December, a blow of a hatchet, which divided the extensor tendons of the fore and middle finger at the metacarpo-phalangian joint. The lower ends presented at the wound, but the upper were retracted beneath the skin to the extent of nearly an inch. An incision carried up to the ends of the retracted tendons, allowed them to be seized by forceps and pierced by a needle armed with a waxed thread; this needle was then passed through the corresponding ends of the tendons below, and they were thus brought into contact with those above, and tied. The external wound was also closed with sutures. The hand was extended on a wide, flat splint, and the wound covered with a linen bandage spread with cerate, and compresses wet with cold water.

12th.—There is considerable swelling of the wrist and great redness; it is necessary to remove the sutures from the wound. In a few days, the inflammation subsided.

20th.—The wound, which is open, but free from redness and inflammation, is in good condition. The edges were brought together with sticking-plaster.

The ligatures of the tendons came away on the 24th and 26th; the external wounds cicatrized at once. On the 8th of January, the splint was dispensed with.

Jan. 22d.—The man has resumed his work, the fingers having gradually recovered their strength and mobility, and having complete power of extension and flexion. In a word, the suture of

the extensor tendons has been attended with all the success which could be desired. A.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION. BY ROBERT WARE, M.D., SECRETARY.

APRIL 19th, 1858.—*Cases of Lead-Poisoning.* Dr. BOWDITCH mentioned a series of cases of lead-poisoning, which occurred in the country. The resident physician, under whose charge they were, stated that before being called to them he had heard that one child had died of supposed marasmus. On visiting them, he found one of the children much wasted and debilitated, without any very distinct symptoms, and he attributed its condition to the miserable poverty of the family. Shortly after, and during his attendance upon this child, another of the family was taken ill with symptoms of lead colic, and on examination he found the blue line well marked upon the gums of the whole family. In a few days, wrist-drop occurred in the last-mentioned patient. The water used by the family was examined, and found to contain a large quantity of lead. During his attendance, all the members of the family were more or less affected—some have had colic, others wrist-drop, and there has been more of an effect upon the mind than is usually observed, some of the family having become semi-idiotic. Other families had used the same water without any bad results. Dr. Bowditch said that the attending physician had promised him a more detailed account of these cases.

MAY 3d.—*Scarlatina a Second Time.* Dr. C. D. HOMANS reported three cases occurring in children of one family. The three children had scarlatina in February last, the disease being well marked, with accompanying sore throat, swollen glands, &c. Three weeks ago, the oldest child, a boy of 6 years, had a similar attack, and then the other two had the disease even more severely than when they first suffered from it.

MAY 17th.—*Idiopathic Tetanus.* Dr. S. A. GREEN reported a case of tetanus, occurring without apparent adequate cause. The patient, an Irish laborer, took off his winter flannels on Saturday, and worked all day in his shirt sleeves without any feeling of chilliness. Saturday, he drank lager beer in considerable quantity. Yesterday (Sunday) morning, he began to have symptoms of tetanus. These increased in violence during the day; and, when seen this morning, his condition was sufficiently marked, and he died about 5, P.M. In reply to questions from several members, Dr. Green stated that the spasmodic action began about the mouth and temporal muscles, that there was a good deal about the larynx, and that opisthotonos occurred. The attacks of spasm came on every few minutes, even without any jarring of the body; the mind was not affected; there was at no time any relaxation about the muscles of the jaw, so that he was wholly unable to open his mouth, and liquids were introduced through a hole worn by his pipe-stem in the teeth. He was able to swallow in the intervals of the more severe convulsions. Death occurred by asphyxia. No wound of any description was found.

Dr. STEVENS spoke of the very slight causes which sometimes produce tetanus, and mentioned that he once saw a case where it followed a stroke of a whip lash.

JUNE 7th.—*Vomiting and Purpura during Pregnancy.* Dr. BUCKINGHAM stated the case.

The patient was 37 years of age, and pregnant with her first child, expecting to be confined on or about the 21st of May. Dr. B. saw her April 1st. She had had an attack of flowing before he saw her, but he could not state at what period of her pregnancy this had occurred. He learned that she had been vomiting almost constantly for several weeks, and had become much prostrated. The night before his visit, she had had a sudden gush of blood from the vagina; there had been no recurrence of this hæmorrhage, and no examination was made. April 29th, Dr. Buckingham saw her again. She had been, in the meantime, under the charge of another physician, a relative. She was very feeble, with a sallow, waxy look; her feet and hands were considerably swollen, and there were large patches of purpura upon the legs and arms, on the forearms especially, which looked as if they had been severely bruised. There were spots of purpura upon the tongue; she had vomited blood at various times, and had had bleeding from the nose and gums, and bloody dejections. The stomach had borne no solid food for some time. Dr. Buckingham advised the induction of premature labor, stating, however, that he did not think she would live through it. April 30th, at 10, A.M., an examination was made, and no evidence of placental presentation was found. The membranes were separated by sweeping a catheter round between them and the os. Dr. B. saw the patient again in the evening, and remained with her through the night. By 5½, A.M., she had had pretty regular pains for about an hour, and the os was dilated to the size of a dollar; by 10, dilatation was complete, and the head was entering the cavity of the pelvis. The pains continued regularly, and with considerable force, till about 12, M., when the head was in the vagina. She then had a large passage of blood from the rectum, and, during the few following pains, considerable bleeding from the uterus. As the pains were diminishing in force, the forceps were at once sent for, but, before they could be applied, she sank and died without being delivered. The child was taken away at once, but all efforts to make it breathe were unavailing; it exhibited no signs of life at all, though it was alive fifteen minutes before its birth. It appeared healthy, well nourished, and showed no marks of purpura. Dr. Buckingham said he supposed that the woman's emotion on learning that instruments were to be used, caused her to faint, and that she was too much exhausted to be roused.

Dr. CABOT asked what means had been employed to relieve the purpura, saying that he thought the question of the propriety of inducing premature labor in such a case depended upon what had been done, or attempted, by means of medicine.

Dr. Buckingham could not state positively what had been done—the patient was not under his care till the day the labor was brought on—but, it was his impression that all the ordinary means had been used in vain, perhaps with less than the usual effect, in consequence of the state of the stomach, which rejected everything.

Delirium Tremens from drinking Ale. Dr. DICKINSON said that he had reported, some time ago, a case of delirium tremens caused by

drinking ale. Since that time, the same individual has had a second attack from the same cause. Opiates were used pretty thoroughly, but without very satisfactory results.

Dr. Cabot brought up the question of the treatment of delirium tremens. He said that he relied chiefly upon opiates and stimulants, with as much nourishing food as the patient will take. At one time he had used no opiates, but latterly had gone back to them, though still doubtful if they are of benefit. He had seen no advantage from the internal use of chloroform, even when given in drachm doses. Inhalation of ether required the constant and prolonged attendance of the physician, but he should use it in any case when convulsions occurred. The worst case he had ever seen which was not fatal, was in a young man who in one night drank nearly a decanter of brandy and a vial of McMunn's elixir of opium, all of which was retained. When Dr. Cabot saw him, early in the morning, he was in severe tetanic convulsions, with opisthotonos and emprosthotonos; the pulse was hardly perceptible, and it seemed as if he must necessarily die. Pure sulphuric ether had no effect upon the convulsions. A mixture of two parts of ether with one of chloroform was then used, and the patient at once became quieter, and the pulse fuller. Inhalation was kept up till natural sleep occurred, and in ten days the patient was well.

Dr. Buckingham said that in the cases of delirium tremens treated in the hospital at South Boston, during his residence there, nothing was given except some wormwood or valerian tea. The best treatment, so far as his own experience went, was acetate of morphia, in extract of valerian, washed down with whiskey and eggs in pretty large doses. He had never seen a fatal case of pure delirium tremens.

Dr. Cabot said he had never seen a fatal result, where there was no complication, except in one case, in which sleep had followed the use of ether, and the patient seemed likely to do well, there being merely a slight cough, for which a pill containing a small quantity of antimony had been given with relief. Dr. Cabot was hurriedly sent for, in the middle of the day, and found the patient in a state of collapse, like a person dying of cholera—blue, cold and pulseless. He died in the course of an hour. Dr. C. had had a case which began like delirium tremens, and ended in a form of apoplexy.

Dr. Osgood said that tartar emetic had been used by some English physician during the stage of violent excitement in delirium tremens, with, by his own account, very considerable success.

Dr. Cabot considered all cases as caused by the re-action following the use of stimulants, and he should suppose that antimony would tend to increase this nervous depression.

Bibliographical Notices.

Anatomy of the Placenta. By John C. Dalton, M.D., Professor of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons of New York. From the American Medical Monthly, July, 1858.

This is a statement of the results of certain investigations undertaken by Prof. Dalton "to demonstrate, by positive evidence, some

points in the anatomy of the placenta which are still in dispute," more particularly with regard to the nature of the vascular connection between the placenta and the uterus. The method pursued in these cases is clearly set forth in the following extract:

"If we take the uterus of a woman who has died undelivered at the full term, or thereabouts, and open it in such a way as not to wound the placenta, this organ will be seen remaining attached to the uterine surface, with all its vascular connections complete. Let the fœtus now be removed by dividing the umbilical cord, and the uterus, with the placenta attached, placed under water with its internal surface uppermost. We then see the fœtal surface of the placenta formed by the chorion, and covered still by the thin and transparent amnion. The amnion should next be removed, which can readily be done by gently detaching it from the surface of the chorion. If the end of a blow-pipe be now introduced into one of the divided vessels of the muscular walls of the uterus, and air forced in by gentle insufflation, we can easily inflate, first the venous sinuses of the uterus itself, and next the deeper portions of the placenta; and, lastly, the bubbles of air insinuate themselves everywhere between the fœtal tufts, and appear in the most superficial portions of the placenta, immediately underneath the transparent chorion. If the chorion be now divided at any point by an incision, passing merely through its own thickness, the air, which was confined beneath it in the placental sinuses, will escape, and rise in bubbles to the surface of the water. Such an experiment shows conclusively that the placental sinuses communicate freely with the uterine vessels, occupy the entire thickness of the placenta, and are equally extensive with the tufts of the fœtal chorion.

"It is unnecessary to say that none of the air thus injected finds its way into the umbilical vessels.

"I have now had the opportunity of doing this experiment with the results just described, on four different occasions since 1853. The first two cases occurred at Bellevue Hospital, in patients who had died of acute disease in the last stages of pregnancy. The third case was of a woman who died undelivered, owing to hæmorrhage from placenta prævia, at the end of the seventh month. The fourth was that of a woman who died of puerperal convulsions at the full term. The examinations were made at different times, in the presence of Dr. C. R. Gilman, Dr. Geo. T. Elliott, Dr. Henry B. Sands, Dr. F. J. Bumstead, Dr. Wm. H. Draper, Dr. Henry D. Noyes, Dr. T. C. Finnell, and Dr. J. W. S. Gouley, all of whom, I believe, were satisfied in every respect with the result of the experiment, and convinced of the existence of the placental sinuses, and of their free communication with the vessels of the uterus."

The conclusion he arrives at is as follows:

"The placenta, accordingly, is a double organ, formed partly by the chorion and partly by the decidua; and consisting of maternal and fœtal vessels, inextricably entangled and united with each other."

The reputation of Dr. Dalton for accuracy of investigation is so well established, that we are willing to accept, without a moment's question, the facts observed. But when we reflect upon the diametrically different results arrived at by others, holding high positions as observers and physiologists, when different methods of research have been employed, we feel that his conclusions yet must bear the test of time. It seems impossible that any other conclusion than the one he draws, from his investigations, can be arrived at; but so many apparent solutions of difficult and intricate questions in physiology have been from time to time proclaimed, which after a while have been disproved, that all that can be properly said of this or any other kindred essay is that it must take its place, and stand or fall as the investigations of others may corroborate or invalidate its conclusions.

W. R.

A Practical Treatise on the Causes, Symptoms and Treatment of Spermatorrhœa. By M. Lallemand. Translated by Henry J. McDougall, M.R.C.S. Third American Edition. Philadelphia: Blanchard & Lea.

Of M. Lallemand's contribution to science on the subject of spermatorrhœa we need scarcely speak, so widely known is it to the profession. We must however remark, that while we award him all the praise which his industry and patient investigation of disease so truly merit, we cannot fail to condemn the spirit of exaggeration which so strongly characterizes the work in question. At the time of the first publication of M. Lallemand's treatise on spermatorrhœa, this was a comparatively new subject, and one which had not been the particular object of study, although the works of Hunter and others contained much that was valuable upon it. On this account, therefore, we may perhaps be inclined to overlook the enthusiasm and zeal with which the ex-professor at Montpellier entered upon this unexplored field. The views advanced by M. Lallemand, and especially his mode of treatment, have now become, however, most essentially modified by more recent inquiries in the same direction, and we cannot regard him any longer as *the* authority upon this affection.

The little treatise of Mr. Wilson, which is appended to this new edition of M. Lallemand's work, is well worthy of perusal. He has arranged the subject in a methodical and scientific manner. His chapter on treatment we can particularly recommend.

We are glad to see that the reluctance which has been so long shown by the profession to enter upon the consideration of an affection which in itself presents so few attractions, is passing away. The true physician cannot hesitate to regard with sympathy, and to relieve, by every means in his power, the sufferings of his brother man, whether such are the result of folly or otherwise.

The volume before us, we are sorry to say, presents that want of taste in the selection of the size, paper and print, which as decidedly marks many of our medical publications. Why cannot we copy the workmanship, as well as the contents, of the English books? S.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, SEPTEMBER 2, 1858.

THE PRESENT ASPECT OF THE PROFESSION OF MEDICINE.

One of the most momentous decisions which a young man just out of college will ever have to make, is that which will link him with his calling in life. There is often a rashness in choosing this, which occasions subsequent bitter regret; and again, there is an ill-judged influence brought to bear, by parents or friends, which sometimes places an individual in a position for which he is neither fitted by taste nor acquirements. Too much care can hardly be exercised in the choice of a pursuit for life; and, whilst this is universally true, it is, perhaps, particularly so in regard to the profession of medicine. Many rush into it without due appreciation of its duties, responsibilities and difficulties—while others, admirably suited to practise it, are deterred by

wrong views, or prejudiced against it by interested persons. The first class are over-bold, the last are either too modest, or else do not realize the fact that the pursuit has its rewards as well as its toils and discouragements. It is well, then, to know what aspirants for its honors and candidates for its duties may expect.

Travelling by railway lately, in the vicinity of one of our best and oldest colleges, we could not avoid hearing the somewhat loud conversation between two young men, evidently about to graduate from the institution. "The world was all before them," and they were debating "where to choose." The various occupations of life were duly canvassed, and sentence of approval or condemnation passed upon each in succession. When the profession of medicine was placed at the bar, we confess to having felt a tremor about the heart, and an anxiety to know its doom. It was summarily dismissed, somewhat in the following terms:—"Medicine! no, I'll have nothing to do with it. I should be afraid to attempt *that* for a living—the study is all well enough, but there's too much humbug afloat in the world about the practice—people haven't confidence enough—and there are so many quacks!" Alas—there is too much truth in some of these words. There *are* quacks—within and without our ranks—we are sorry to be obliged to admit both these propositions, side by side—but who will dispute them? Yet, for all this, we can fearlessly and honestly say, not only to the above fearful youth, but to all around us—lay and professional—there is nothing in the present aspect of the medical profession to dishearten either those who are fighting their way honorably under its banners, nor such as are thinking of making it the occupation of their choice. What matters it if there are impostors in large numbers all around us, and even within our camp? Not only is there the more need of vigilance and courage, but a close observation will show that these qualities are in existence, and growing daily. Are there traitors. So there are in every army. Washington had them in his—Napoleon in his—they were very different men, it is true—but they did not fail in their campaigns. There are difficulties and temporary trials and vexations, and heartburnings in our work, as there were in theirs—and sometimes wounds are received, worse than the ugly gun-shot stroke—but how could it be otherwise? He is but a "weak vessel," who will shirk duty because it involves difficulties, responsibilities, trials, and even disappointments. Suppose the Atlantic Telegraph Expedition had been abandoned, because the cable broke so many times?—it would, perhaps, have been a natural, but how disastrous a result. Perseverance in doing our duty, when we are convinced what it is, is the life of every occupation; and no man is fit for any business, who intends to allow himself to be buried under the first, or the hundredth avalanche of counter-influences and untoward events. So we advise all students to pause before they enter the profession of medicine, or any other; and if they are afraid to encounter the natural and inevitable obstacles which they see attached to all mortal occupations—they had better not make the trial. "Humbug" they will find; they will also, no doubt, discover that physicians do not grow rich with rapidity—indeed, almost never—but then they can ignore humbug, generally, rebuke it when necessity arises for so doing, and, if they choose the right places wherein to exercise their knowledge, and have the proper share of industry, together with even a moderate amount of ability, they will get "a living."

Besides, the study and practice of medicine and surgery have their bright side—and when we can see that, it is best not to look too long at the other. The study itself is deeply interesting—fascinating, even; and few things can more truly compensate the hard-working practitioner, than the knowledge that he has often relieved pain, and saved, or at least prolonged life. It is a high privilege, indeed, to be the agent of the Almighty in such dispensations.

Let those, then, who think of practising as physicians and surgeons, deliberately count the cost—but let them have no fear, when once embarked in active professional life, that they who work faithfully, act uprightly, and truly honor their profession, will ever fail of their reward.

THE SPECULUM IN UTERINE DISEASE.

HAVING quoted, in our last issue, at the request of a correspondent, Dr. Robert Lee's opinions in reference to the use of the speculum in the diagnosis and treatment of uterine diseases, we think we ought to present certain remarks relative to them, which appear in the *British and Foreign Medico-Chirurgical Review* for July, 1858. These comments are made upon the article above referred to, and which is contained in the fortieth volume of the "Medico-Chirurgical Transactions," 1857; they are as follows:—

"Dr. Lee is well known as a most determined opponent of the use of the speculum-vaginæ for any affection whatsoever. In a previous volume of the 'Medico-Chirurgical Transactions,' he has published a collection of 220 cases in which the speculum and caustic had been employed by other practitioners; and we have now the details of 80 more, making, in all, the overwhelming number of 300. Dr. Lee argues, with his usual energy, that in all these cases the introduction of the speculum was unnecessary, injurious, or immoral. 'The speculum,' (he says) 'emanated from the syphilitic wards of the hospitals of Paris, and it would have been better for the women of England had its use been confined to those institutions!' We quite agree with Dr. Lee that the speculum is an instrument which has been, and is, much abused; but we cannot go along with him in his sweeping denunciations against it, or believe that it is not at times of great service. Cases may be collected and used in such a way, as to prove or disprove any method of practice either in medicine or surgery; and when we examine Dr. Lee's great array of cases, we cannot avoid the impression that he must have been led away, however unwittingly, by a foregone conclusion. He would have conferred a much greater boon upon the profession by accurately defining these classes of symptoms, which alone might justify the practitioner in employing the speculum."

We think the reviewer is judicious in his criticism. Because an instrument, or a mode of treatment, may be abused, it does not follow that therefore it must never be used. The proper employment of the speculum-vaginæ is often indisputably necessary; and whilst we believe that it has been recklessly and unwarrantably employed—and often for long periods of time—we would not have it unjustly decried, nor hastily proscribed. In the hands of the conscientious and well-informed practitioner, it is often of inestimable advantage.

Velpeau and West, it is well known, have expressed themselves very positively against the too indiscriminate use of the speculum. The former says—"This instrument is far too frequently used, and leads to errors in diagnosis; it can at best only tell us the tint of the os uteri, and even the knowledge of this is often of no use whatever. The finger is far more useful; by it we can make out ulcerations,

granulations, fungosities, and the consistence of the cervix. Young practitioners should get accustomed to make their diagnosis by digital examination alone. (Vide *Braithwaite's Retrospect*, Part 37, July, 1858.)

With all due deference to such authority, we hazard the opinion that it is, *occasionally*, not only desirable, but imperatively requisite that the cervix should be seen as well as felt.

The remarks of West, we think, are admirable, and so fully meet the requirements of the subject, that we quote them in full.

"To answer the broad question, 'What is your opinion of the speculum?' I feel, on the other hand, to be a very difficult matter, and to expose me to much risk of being misunderstood.

"I will, however, do my best to reply to the inquiry. Those who first introduced the speculum into practice, employed it for two purposes; partly as furnishing a new means of diagnosis, partly as enabling them to adopt various modes of local treatment, which, without it, were impracticable. Now I believe that the advantages of those topical medications for which the speculum is needed, have been greatly overrated; though there are some cases, and those such as have proved most rebellious under other plans of treatment, in which these local measures may be resorted to with the most signal advantage.

"In estimating the value of the speculum as a means of diagnosis, I think that the advances in knowledge of uterine disease, of which it was the indirect occasion, by the impulse which it gave to their study, are sometimes confounded with those positive additions to our information, which we owe exclusively to the use of that instrument. The former have been very great indeed, and I think candor compels us to acknowledge that they have been due almost exclusively to persons who, not content with our previous means of investigating uterine disease, have labored to increase them by the employment of instruments. The latter have certainly been less considerable, but nevertheless the speculum enables us in many instances to decide at once, and with certainty, upon the nature of a case, which otherwise we should have understood only after long and careful watching, to discover some minute polypus which the fingers alone would not have detected, to determine the source of a profuse leucorrhœal discharge, and to decide whether it is furnished by the cavity of the womb, or the walls of the vagina; or, from the redness, congestion or abrasion of the os uteri, to infer the state of the womb generally, and thus to conduct our treatment upon the sure ground of positive observation, not upon bare presumptions. At the same time, however, that I hold the speculum to be in many cases of most essential service, I think that the endeavor of all of us should be to ascertain the mimimum of frequency with which its employment is necessary. This is to be done not by decrying the instrument, still less by attributing dishonest motives to those who use it, but by soberly and honestly trying to test the value of the information which we derive from it, and learning to discriminate between those appearances which the speculum discloses that are of moment, and such as are of no importance."

PHOTOGRAPHY AS AN AID TO MEDICINE.

We referred, some time since, to the advantages to be derived from the art of photography in presenting to the surgeon the means of judging of a patient's case, and deciding whether he may be prescribed for at a distance or whether he should come to the practitioner and be treated, or finally, it may be added, whether his case is one to be undertaken at all. Deformities were the class of ailments to which we had reference in our former article, and the photographic representations of certain orthopœdic patients sent to Dr. J. B. Brown, of this city, and showing the progress of cure, were those particularly in question. We observe, in a recent number of the London *Lancet* (July 17, 1858), that attention is called, editorially, to "Pathological

Photography"; and we cannot but think the project must more and more enlist the attention of practitioners. Medical gentlemen who report cases at the meetings of our various societies, should, as often as it is available, follow the good examples already frequently set, of furnishing a daguerreotype view of the patient who presents a tumor or some other striking deformity. A history of the disease is thus begun, to which constant additions may easily be made, and the results of treatment or the ravages of unconquerable disorder shown, and kept for the future information, no less of the one who manages the case, than of the profession at large. Thus, also, may a fac-simile be preserved of internal parts exhibiting the marks of disease.

The *Lancet* thinks that the profession is very slow to recognize this easy and valuable aid in the study of pathology and the practice of our art—and that the same is true of many other adjuvants, which are too often either wholly repudiated or reluctantly accepted, merely because they are new and lack the *prestige* of age and the endorsement of extended authority. The editor remarks:—

"Photography has not fulfilled a tithe of the indications of which it is capable. The artist is but half inclined to admit that it can be an assistance to him; the architect does not invoke its aid as often as he should; the astronomer and microscopist do not, as a general rule, believe that it can be brought to usefully illustrate their respective sciences; and the surgeon employs it but very seldom, and then only to delineate some case of extraordinary deformity or unusual interest. We have been furnished with a proof of its applicability to anatomy by our French neighbors. Some time since there were at Clamart some stereoscopic views of regional anatomy. We now learn from *La Lumiere* that some admirable representations of lymphatic vessels have been produced, and that M. Nelaton has attached to La Clinique a photographic artist, whose special duty it is to preserve representations of cases before and after operation, thus providing a record of each interesting case, which will be hereafter useful, not only as a means of reference, but of instruction.

"It is easy to imagine how this idea can be extended in its application to almost every branch of the profession. It would preserve accurate delineations of any anatomical abnormalities met with in the dissecting-room; it would provide an invaluable record of success or failure in the treatment of deformities; stereoscopic views of the chest in health and disease would be very interesting; in fact, its more extended application would be fraught with great interest to both physician and surgeon, whether they had recourse to it in the ward, the operating-theatre, or the dissecting-room."

In common with our eminently practical and valuable English cotemporary, we would express the hope that our hospitals and similar institutions may have photographists attached to them, in like manner as they now have microscopists, pathological anatomists, chemists, &c. As the writer we have quoted continues:—"how important and valuable a note-book or museum catalogue would become, if illustrated by photographs taken from patients during the time they were under inspection!"

May we not reasonably expect to see arrangements of this description set on foot in our excellent medical institutions, whose managers are always ready to adopt whatever is of real advantage in carrying out the object for which every hospital is founded and sustained?

Dr. Weinland's Essay on Human Cestoides.—We have received a copy of this admirable essay from the author. A notice of the work, from the pen of a physician of this city well qualified to do it justice, will appear in our next. We trust the author will find sufficient encouragement to induce him to carry out the plan he has commenced.

Dr. Mott's Surgical Museum.—Professor Mott, of New York, has lately published a catalogue of his Museum. The collection is composed chiefly of parts removed from the living body during his numerous operations, and comprises more than a thousand specimens. It may be found at the Fourteenth Street Medical College, and is free to the public.—*New York Times.*

On the Medicinal Use of Sugar. By Dr. F. J. BEHREND and Dr. SIEBER.—The authors recommend the medicinal use of sugar as a curative means of great value in diarrhœa and several other affections of children, and they relate two cases of diarrhœa—one in a child aged three years, and another in a child aged four years—in which half an ounce of powdered white sugar, given every hour, soon gave a favorable turn to symptoms of extreme gravity, which had long resisted all the ordinary means of cure. Other evidence is promised, and we wait for this before forming an opinion; but we are quite prepared to agree with the authors in thinking that there are many conditions of diarrhœa, particularly those in which there is a putrefactive tendency in the alvine secretions, where sugar will in all probability prove a most valuable remedy.—*Ranking's Abstract.*

Tears containing Sugar from a Case of Diabetes.—Dr. GIBB showed to the Pathological Society (May 18) some tears shed by a young married lady, aged 21, the mother of one child, who has had diabetes for two years since the child was weaned. They contained a large amount of sugar, as contrasted with that in an equal bulk of her urine, which was of the specific gravity of 1043. An evaporated drop of the tears on a piece of glass gave a much thicker and more opaque crust than was yielded by a drop of the urine.—*Medical Times and Gazette.*

Dr. Lyon Playfair has been elected Professor of Chemistry in the University of Edinburgh.——The Emperor of the French has bestowed on Dr. Des Brulais, the surgeon of the *Regina Cœli*, a pension of 1800 francs, for his services on a late occasion as medical officer to the above-named vessel.——Dr. Meadows has been elected physician-accoucheur, and Mr. William Bird surgeon, to the St. George's and St. James's Dispensary.——During the year ending Sept. 29th, 1857, 423,421 persons were vaccinated by the public vaccinators in England and Wales; of these, 411,268 were successful cases.——Dr. Livingstone has started inland from Cape Town, and is probably now at Zambesi. He seems to be in excellent health and spirits, and the new explorations are commencing under extremely favorable circumstances.——At the late Meath assizes, Mary Moran was indicted for the manslaughter of a child by illegally inoculating it with small-pox. She was found guilty, and sentenced to three months' imprisonment.—*London Lancet.*

Health of the City.—The mortality tables present the unusual coincidence of precisely the same number of deaths for the past week, both in 1857 and 1858, viz., 103. There is, moreover, a near approach to the number of deaths from cholera infantum, there having been 28 in 1857, to 26 last week. This disease still outstrips the other recorded fatal maladies, but there is a diminution of 4 from the deaths by it during the previous week. The parallelism above noticed seems to pervade all the disorders of these particular corresponding weeks of 1857 and 1858. Thus, in 1857 there were 15 deaths by consumption, this year 12; and 5 deaths each week from inflammation of the lungs. Whooping cough has 5 victims last week to 2 at the same period in 1857.

Communications Received.—Chronic Meningitis.—Use of Belladonna in arresting the Lacteal Secretion.—The Adaptability of the Climate of California to Phthisical Patients.

Books and Pamphlets Received.—The Uræmic Convulsions of Pregnancy, Parturition and Childbed. By Dr. Carl R. Braun.—On Medicine and Medical Education. By W. T. Gairdner, M.D.—Tilden and Company's Book of Formulæ.

Deaths in Boston for the week ending Saturday noon, August 28th, 103. Males, 49—Females, 54.—Inflammation of the bowels, 2—inflammation of the brain, 1—disease of the brain, 1—consumption, 12—convulsions, 2—cholera infantum, 26—croup, 2—dysentery, 4—dropsy, 3—dropsy in the head, 6—drowned, 1—debility, 1—infantile diseases, 10—puerperal, 1—scarlet fever, 1—typhoid fever, 1—hæmorrhage, 1—disease of the hip, 1—homicide, 1—inflammation of the lungs, 5—disease of the liver, 1—marasmus, 3—measles, 2—old age, 2—palsy, 1—pleurisy, 1—scrofula, 1—teething, 2—thrush, 1—unknown, 2—whooping cough, 5.

Under 5 years, 73—between 5 and 20 years, 4—between 20 and 40 years, 15—between 40 and 60 years, 6—above 60 years, 5. Born in the United States, 83—Ireland, 14—other places, 6.